

FORM PTO-1390

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY DOCKET NUMBER THOM-0007

TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE (DO/EO/US)
CONCERNING A FILING UNDER 35 U.S.C. 371

U.S. APPLICATION NO. (if known see 37 C.F.R. 1.5)

09/308515

INTERNATIONAL APPLICATION NO.
PCT/GB98/02619INTERNATIONAL FILING DATE
01 September 1998 (01.09.98)PRIORITY DATE CLAIMED
26 September 1997 (26.09.97)

TITLE OF INVENTION FILLING COMPRISING A POLYESTER FIBRE

APPLICANT(S) FOR DO/EO/US BLACK, Robert Paul

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
 2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
 3. ☒ This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
 4. ☐ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
 5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2)).
 - a. ☒ is transmitted herewith (required only if not transmitted by the International Bureau) **not required but is submitted**
 - b. ☐ has been transmitted by the International Bureau.
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US)
 6. ☐ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
 7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
 - a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☐ have been transmitted by the International Bureau.
 - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - d. ☒ have not been made and will not be made.
 8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
 - ☐ An oath or declaration of the inventor(s) 35 U.S.C. 371(c)(4).
 10. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).
- Items 11. to 16. below concern other document(s) or information included:
11. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
 12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
 13. ☒ A **FIRST** preliminary amendment.
☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
 14. ☐ A substitute specification.
 15. ☐ A change of power of attorney and/or address letter.
 16. ☒ Other items or information: Copy of PCT Publication including European Search Report is attached.

EXPRESS MAIL Mailing Label No. EL 0663907260S
Date of Deposit: 20 May 1999I hereby certify that this paper or fee is being deposited with the
United States Postal Service "Express Mail Post Office to
Addressee" service under 37 CFR 1.10 on the date indicated
above and is addressed to the Assistant Commissioner for
Patents, Washington, D.C. 20231MAILER Mark FosterSIGNATURE Mark Foster

U.S. APPLICATION NO. (if known) **09/308515**INTERNATIONAL APPLICATION NO.
PCT/GB97/02619ATTORNEY DOCKET NUMBER
THOM-000717. ☒ The following fees are submitted:

Basic National Fee (37 CFR 1.492(a)(1)-(5)):

Search Report has been prepared by the EPO or JPO.....\$840.00

International preliminary examination fee paid to USPTO (37 CFR 1.482)

.....\$670.00

No international preliminary examination fee paid to USPTO (37 CFR 1.482) but
international search fee paid to USPTO (37 CFR 1.445(a)(2)).....\$760.00Neither international preliminary examination fee (37 CFR 1.482) nor international
search fee (37 CFR 1.445(a)(2)) paid to USPTO.....\$970.00International preliminary examination fee paid to USPTO (37 CFR 1.482) and all
claims satisfied provisions of PCT Article 33(2)-(4).....\$96.00

CALCULATIONS PTO USE ONLY

ENTER APPROPRIATE BASIC FEE AMOUNT =

\$ 840.00

Surcharge of \$130.00 for furnishing the oath or declaration later than _ 20 _ 30 months from
the earliest claimed priority date (37 CFR 1.492(e)).

\$

Claims	Number Filed	Number Extra	Rate		
Total claims	17 - 20 =	0	X \$18.00	\$	
Independent Claims	1 - 3 =	0	x \$78.00	\$	
Multiple dependent claims(s) (if applicable)			+ \$260.00	\$	

TOTAL OF ABOVE CALCULATIONS =

\$840.00

Reduction by 1/2 for filing by small entity, if applicable. Verified Small Entity statement must
also be filed. (Note 37 CFR 1.9, 1.27, 1.28).

\$

SUBTOTAL =

\$840.00

Processing fee of \$130.00 for furnishing the English translation later than _ 20 _ 30 months
from the earliest claimed priority date (37 CFR 1.492(f)).

+

\$

TOTAL NATIONAL FEE =

\$840.00

Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be
accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property

+

TOTAL FEES ENCLOSED =

\$840.00

Amount to be:
refunded \$

charged \$

a. ☒ A check in the amount of \$840.00 to cover the above fee is enclosed.b. ☐ Please charge my Deposit Account No. 23-3050 in the amount of \$_____ to cover the above fees. A duplicate copy of this sheet is
enclosed.c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit
Account No. 23-3050. A duplicate copy of this sheet is enclosed.NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b))
must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

John W. Caldwell, Esq.
Woodcock Washburn Kurtz
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One Liberty Place - 46th Floor
Philadelphia, PA 19103
(215) 568-3100

SIGNATURE

John W. Caldwell
NAME28,937
REGISTRATION NUMBER

09/308515

44 Rec'd PCT/PTO 29 MAY 1999

THOM-0007

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Before the United States (DO/EO/US)
for the Patent Cooperation Treaty
In a Filing Under 35 U.S.C. 371
Via Express Mail Label EL 066 390 726US

In re application of: **BLACK, Robert Paul**
International Application No.: **PCT/GB98/02619**
International Filing Date: **01 September 1998**
Title: **FILLING COMPRISING A POLYESTER FIBRE**

Honorable Commissioner of
Patents and Trademarks
Box PCT (DO/EO/US)
Washington, D.C. 20231

Dear Sir:

PRELIMINARY AMENDMENT

Preliminary to examination of the above-identified application, it is respectfully requested that the following amendments be entered.

In the claims:

2. [A] The non-woven blend [as claimed in] of claim 1 wherein the polyester filling fibre is a polyethyleneterephthalate fibre.
3. [A] The non-woven blend [as claimed in claim 1 or 2] of claim 1 wherein the cellulosic fibre is lyocell.
4. [A] The non-woven blend [as claimed in any of the preceding claims] of claim 1 comprising, by weight, no more than 80% of the cellulosic fibre.
5. [A] The non-woven blend [as claimed in any of the preceding claims] of claim 1 wherein the cellulosic fibre is present in an amount, by weight, of from 10-60% of the blend.
6. [A] The non-woven blend [as claimed in any of the preceding claims] of claim 1 wherein the cellulosic fibre is present in an amount, by weight, of from 20-60% of the blend.

7. [A] The non-woven blend [as claimed in any of the preceding claims] of claim 1 wherein the cellulosic fibre is present in an amount, by weight, of from 25-60% of the blend.

8. [A] The non-woven blend [as claimed in any of the preceding claims] of claim 1 wherein the polyester filling fibre comprises monofibres which are crimped or conjugate fibres.

9. [A] The non-woven blend [as claimed in any of the preceding claims] of claim 1 wherein the polyester filling fibre comprises conjugate fibre.

10. [A] The non-woven blend [as claimed in any of the preceding claims] of claim 1 wherein the cellulosic fibre is a saw-toothed crimp fibre.

11. Fibreballs comprising [a] the non-woven blend [as claimed in any of the preceding claims] of claim 1.

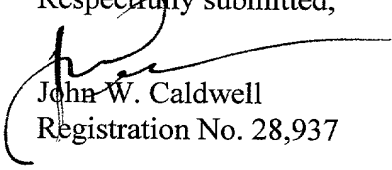
12. A wadding comprising a carded and layered non-woven blend [as claimed in any of claims 1 to 10] of claim 1.

13. A padding, stuffing or filling material comprising [a] the non-woven blend [as claimed in any of claims 1 to 10] of claim 1.

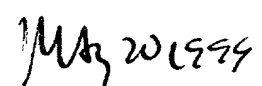
14. A bedding article comprising [a] the non-woven blend [as claimed in any of claims 1 to 10, fibreballs as claimed in claim 11, wadding as claimed in claim 12 or a padding, stuffing or filling material as claimed in claim 13] of claim 1.

16. An article of clothing comprising [a] the non-woven blend [as claimed in any of claims 1 to 10, fibreballs as claimed in claim 11, a wadding as claimed in claim 12 or a padding, stuffing or filling material as claimed in claim 13] of claim 1.

Respectfully submitted,


John W. Caldwell
Registration No. 28,937

/mf


Date: May 20, 1999
WOODCOCK WASHBURN KURTZ
MACKIEWICZ & NORRIS LLP
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Applicant or Patentee: BLACK, Robert Paul

International Serial or

Patent No.:

PCT/GB98/02619

Attorney's Docket No.: THOM-0007

International Filing Date: 01 September 1998

For: FILLING COMPRISING A POLYESTER FIBRE

**STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS (37 CFR
1.9(d) and 1.27(c)) - SMALL BUSINESS CONCERN**

I hereby declare that I am:

- ☐ the owner of the small business concern identified below:
- ☒ an official empowered to act on behalf of the concern identified below:

NAME OF CONCERN: FIBRETECH LIMITED

ADDRESS OF CONCERN: Brook Mill, Hollins Road, Oldham OL8 4JY, Great Britain

I hereby declare that the above-identified small business concern qualifies as a small business concern as defined in 13 CFR 121.12, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, in that: (1) the number of employees of the concern, including those of its affiliates, does not exceed 500 persons; and (2) the concern has not assigned, granted, conveyed, or licensed, and is under no obligation under contract or law to assign, grant, convey, or license, any rights in the invention to any person who could not be classified as an independent inventor if that person had made the invention, or to any concern which would not qualify as a small business concern or a nonprofit organization under this section. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention described in the

- ☐ specification filed herewith, with title as listed above.
- ☒ International Patent application identified above.
- ☐ patent number identified above.

If the rights held by the above-identified small business concern are not exclusive, each individual, concern or organization having rights in the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).

***NOTE:** Separate statements are required for each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

FULL NAME:

ADDRESS:

N/A

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

FULL NAME:

ADDRESS:

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

NAME OF PERSON SIGNING X ROBERT PAUL BLAKE

TITLE OF PERSON SIGNING X MANAGING DIRECTOR

ADDRESS OF PERSON SIGNING: NEW PREMISE MANLEY
CHESHIRE WILKINSON ENGINEERS

X R. P. Blake
SIGNATURE

X 10-6-99 (JUNE)
DATE

- 1 -

DESCRIPTIONFILLING COMPRISING A POLYESTER FIBRE

The present invention relates to a filling comprising a polyester fibre. More particularly it relates to an improved polyester fibre containing filling for use where thermal properties and/or breathability are important, such as in the soft furnishings industry, where it may be used as a filling for bedding, for example duvets, pillows, mattress protectors and sleeping bags or in the clothing industry where it may be used as a filling for coats, anoraks, and the like, particularly ski and winter wear.

Polyester fibre, usually polyethyleneterephthalate, is an inexpensive alternative to down or feathers. However it lacks breathability. In an attempt to improve the characteristics of a filling comprising polyester fibre, the polyester fibre has been blended with natural materials such as, for example, cotton, silk, down and feather.

Considerable effort has been made in the industry to provide an improved synthetic filling and in particular one with improved breathability.

It is an aim of the present invention to provide a synthetic fibrefill with improved breathability but which retains at least some of the desirable properties of polyester fibrefill.

It has unexpectedly been found that cellulosic fibres obtained by an organic solvent spinning process, and in particular one in which the organic solvent is N-methyl morpholine oxide (NMMO) e.g. lyocell, when blended (in

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contrast to woven) with a polyester filling fibre such as, for example, polyethyleneterephthalate gives rise to a product with improved characteristics including improved breathability compared to a polyester filling fibre alone. The finding was unexpected given that lyocell fibres are traditionally flat and would not have been expected to be a good filling fibre. Lyocell is a cellulosic fibre made by direct dissolution of wood pulp in an organic solvent and has to date been used primarily in the development of technical textiles, namely woven fabrics comprising interlaced warp and weft threads.

It is another aim of the present invention to provide a synthetic fibrefill with improved thermal performance.

It has unexpectedly been found that cellulosic fibre e.g. lyocell, when blended with a polyester filling fibre, such as, for example, polyethyleneterephthalate gives rise to a product with improved thermal characteristic compared to the component fibres alone.

According to the present invention there is provided a non-woven blend comprising or consisting of a polyester filling fibre and a cellulosic fibre obtained by an organic spinning process.

Preferably the cellulosic fibre is lyocell.

Preferably the polyester filling fibre is polyethyleneterephthalate fibre.

Preferably the blend comprises, by weight, no more than 80%, more preferably still 60%, of the cellulosic fibre, for example, lyocell.

More preferably the cellulosic fibre, for example, lyocell is present in an amount of from 10 - 60% by weight and ranges therebetween, more

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preferably still 20- 60% and more preferably still from 25- 60% of the blend.

Preferably the polyester filling fibre comprises mono fibres which are crimped or conjugate fibres. By conjugate fibres is meant fibres comprising two different fibre-forming polymeric units arranged side by side so that on heat treatment the fibre becomes spirally crimped.

Preferably the cellulosic or lyocell fibre is a saw-toothed crimp fibre.

More preferably the cellulosic or lyocell fibres and polyester filling fibres are formed into a fibre ball. To form a fibre ball it is preferred to use a lyocell cellulosic fibre blended with a conjugate polyester preferably of polyethyleneterephthalate.

Alternatively a lyocell cellulosic fibre and either a conjugate polyester or a regular saw tooth crimp polyester fibre are blended, carded and layered into a wadding. For the avoidance of doubt a wadding is neither a woven product nor a fabric.

Preferably the wadding is more than 3 mm thick and more preferably more than 5 mm thick. It is a loose open material in contrast to compressed materials such as for example felts.

According to a further aspect of the present invention there is provided a bedding article comprising as a filling a non-woven blend of the invention.

According to a further aspect of the present invention there is provided an article of clothing comprising as a filling a non-woven blend of the invention.

The bedding article may be, for example, a duvet, pillow, quilt,

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sleeping bag, cushion or other similar article.

The clothing article may be, for example, a jacket, coat, or anorak.

The non-woven blend has characteristics which make it more desirable than a polyester filling, for example, polyethyleneterephthalate alone:

- 1) it has a more down like feel;
- 2) weight for weight it is warmer than polyethyleneterephthalate; and
- 3) It is breathable, i.e. moisture absorbent;

Fibreballs of the non-woven blend also show improved breathability and thermal properties.

The blending of fibres, and the production of fibre balls are well known processes to the man skilled in the art and are not therefore described herein.

The invention will be further described, by way of example only, with reference to the tabulated test data shown in tables 1 and 2 below:

Table 1 shows the products under test; and

Tables 2 and 3 show the properties of the products under test.

It should be noted with reference to table 1 that pure lyocell has a fill weight of 49.3 gm/m²/tog, which is similar to the figure of 49 gm/m²/tog for pure polyester. The blend however gives a figure of 39 gm/m²/tog ie a synergistic and non obvious effect is achieved with a mixture.

TABLE 1

	Duvet Weight	U.K. Tog Test	Fill wgt gm/m ² /tog
Cellulosic/ Polyester Carded Blend	2060g	13.5	37
Goose down	1790g	13.5	18
Hollow Polyester fibre Carded	2488g	13.5	49

TABLE 2

	THERMOREGULATORY MODEL OF MAN (MANNIKIN) EFFECTIVE IN USE DATE					Ratio of Thermal % Difference Insulation From to weight Cellulosic (high best)	Thermal Physiological % Difference Comfort (temp. °C) (low best)	
		Thermal % Difference Insulation From (High best) Cellulosic	Effective % Difference Water Vapour From Resistance Cellulosic (low best)	Water % Difference Vapour From permeability Cellulosic (high best)	THIS IS THE BREATHABILITY MOISTURE TRANSPORT PROPERTIES			
Cellulosic/Polyester Carded Blend	7.8		841	0.56		379	5.5°C	
Goose down	7.3	-6.4%	845	0.52	-7.1%	490	7.1°C	+29%
Hollow polyester fibre	7.21	-7.6%	840	0.51	-8.8%	290	7.40°C	-35%
		THIS IS WARMTH RATING	THIS IS THE RESISTANCE TO WATER VAPOUR INVASION	THIS IS THE BREATHABILITY MOISTURE TRANSPORT PROPERTIES	WARMTH TO WEIGHT RATIO		MINIMUM TEMPERATURE BEFORE DISTURBED SLEEP	

TABLE 3

	THERMOREGULATORY MODEL OF SKIN		Buffering Capacity Moisture Transport & Take-up properties	% Difference from Cellulosic
	Water Vapour Take-up (gm/m ²) (high best)	% Difference From Cellulosic		
Cellulosic/Polyester Carded Blend	42.0		5.0	
Goose down	42.8	+ 1.9%	4.1	- 18%
Hollow polyester fibre	26.5	-36.9%	4.1	- 18%
	ABILITY TO REMOVE WATER VAPOUR QTY		ABILITY TO TRANSPORT MOISTURE AWAY FROM BODY FROM SWEAT PULSE	
	RATE OF MOISTURE ABSORBANCE			

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It will be noted from test results shown in tables 2 and 3 that the non-woven blend of the invention is significantly better than pure polyester (the current synthetic filling of choice) when it comes to its thermal insulation properties, its water vapour permeability index, its ratio of thermal insulation to weight, its thermal physiological comfort, its water vapour take up and its buffering capacity moisture transport and uptake properties and only insignificantly worse in its effective water vapour resistance. In other words, the non-woven blend confers a higher degree of thermal insulation and possesses better moisture transport properties under stationary conditions combined with better moisture absorption than a pure polyester material.

CLAIMS

1. A non-woven blend comprising or consisting of a polyester filling fibre and a cellulosic fibre obtained by an organic spinning process.

2. A non-woven blend as claimed in claim 1 wherein the cellulosic fibre is lyocell.

3. A non-woven blend as claimed in claim 1 or 2 wherein the polyester filling fibre is polyethyleneterephthalate fibre.

4. A non-woven blend as claimed in any of the preceding claims comprising, by weight, no more than 80% of the cellulosic fibre.

5. A non-woven blend as claimed in any of the preceding claims wherein the cellulosic fibre is present in an amount, by weight, of from 10-60% of the blend.

6. A non-woven blend as claimed in any of the preceding claims wherein the cellulosic fibre is present in an amount, by weight, of from 20-60% of the blend.

7. A non-woven blend as claimed in any of the preceding claims wherein the cellulosic fibre is present in an amount, by weight, of from 25-60% of the blend.

8. A non-woven blend as claimed in any of the preceding claims wherein the polyester filling fibre comprises monofibres which are crimped or conjugate fibres.

9. A non-woven blend as claimed in any of the preceding claims

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wherein the polyester filling fibre comprises conjugate fibre.

10. A non-woven blend as claimed in any of the preceding claims wherein the cellulosic fibre is a saw-toothed crimp fibre.

11. Fibreballs comprising a non-woven blend as claimed in any of the preceding claims.

12. A wadding comprising a carded and layered non-woven blend as claimed in any of claims 1 to 10.

13. A padding, stuffing or filling material comprising a non-woven blend as claimed in any of claims 1 to 10.

14. A bedding article comprising a non-woven blend as claimed in any of claims 1 to 10, fibreballs as claimed in claim 11, a wadding as claimed in claim 12 or a padding, stuffing or filling material as claimed in claim 13.

15. A bedding article as claimed in claim 14 selected from the group consisting of a duvet, a pillow, a mattress, a mattress protector, a sleeping bag, a topper, a quilt, an enhancer, a comforter and a bed.

16. An article of clothing comprising a non-woven blend as claimed in any of claims 1 to 10, fibreballs as claimed in claim 11, a wadding as claimed in claim 12 or a padding, stuffing or filling material as claimed in claim 13.

17. An article of clothing as claimed in claim 16 selected from the group consisting of a coat, a jacket, an anorak, and ski or winter wear.

DOCKET NO. THOM-0007

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of: BLACK, Robert Paul

International Serial No.: PCT/GB98/02619

U.S. Serial No.: 09/308,515

Group Art Unit:

International Filing Date: 01 September 1998

U.S. Filing Date: Herewith

Examiner:

For: FILLING COMPRISING A
POLYESTER FIBRE

Assistant Commissioner for Patents
Washington DC 20231

Sir:

ASSOCIATE POWER OF ATTORNEY

The undersigned, of the firm WOODCOCK WASHBURN KURTZ
MACKIEWICZ & NORRIS LLP, One Liberty Place - 46th Floor, Philadelphia, Pennsylvania
19103, Attorney and/or Agents for Applicant(s), hereby appoints the following:

Robert B. Washburn	Registration No. <u>16,574</u>	Lynn A. Malinoski	Registration No. <u>38,788</u>
Richard E. Kurtz	Registration No. <u>19,263</u>	Lori Y. Beardell	Registration No. <u>34,293</u>
John J. Mackiewicz	Registration No. <u>19,709</u>	Michael P. Straher	Registration No. <u>38,325</u>
Norman L. Norris	Registration No. <u>24,196</u>	David A. Cherry	Registration No. <u>35,099</u>
Albert W. Preston, Jr.	Registration No. <u>25,366</u>	Anthony J. Rossi	Registration No. <u>24,053</u>
Dale M. Heist	Registration No. <u>28,425</u>	Michael J. Swope	Registration No. <u>38,041</u>
Philip S. Johnson	Registration No. <u>27,200</u>	Michael J. Bonella	Registration No. <u>41,628</u>
		Harold H. Fullmer	Registration No. <u>42,560</u>
Gary H. Levin	Registration No. <u>28,734</u>	William R. Richter	Registration No. <u>43,879</u>
Steven J. Rocci	Registration No. <u>30,489</u>	John E. McGlynn	Registration No. <u>42,863</u>
Dianne B. Elderkin	Registration No. <u>28,598</u>	Kimberly R. Hild	Registration No. <u>39,224</u>
Francis A. Paintin	Registration No. <u>19,386</u>	Lawrence A. Aaronson	Registration No. <u>38,369</u>
John P. Donohue, Jr.	Registration No. <u>29,916</u>	Jonathan M. Waldman	Registration No. <u>40,861</u>
Henrik D. Parker	Registration No. <u>31,863</u>	Paul K. Legaard	Registration No. <u>38,534</u>
Suzanne E. Miller	Registration No. <u>32,279</u>	Chad Ziegler	Registration No. <u>44,273</u>
Lynn B. Morreale	Registration No. <u>32,842</u>	David N. Farsiou	Registration No. <u>44,104</u>
Mark DeLuca	Registration No. <u>33,229</u>	Maureen Gibbons	Registration No. <u>44,121</u>
Joseph Lucci	Registration No. <u>33,307</u>	Steven H. Meyer	Registration No. <u>37,189</u>
Michael P. Dunnam	Registration No. <u>32,611</u>	John M. Paolino	Registration No. <u>40,340</u>
Michael D. Stein	Registration No. <u>34,734</u>	Joseph R. Condo	Registration No. <u>42,431</u>
Albert J. Marcellino	Registration No. <u>34,664</u>	Michael K. Jones	Registration No. <u>41,100</u>
David R. Bailey	Registration No. <u>35,057</u>	Frank T. Carroll	Registration No. <u>42,392</u>
Doreen Yatko Trujillo	Registration No. <u>35,719</u>	Hans J. Crosby	Registration No. <u>P44,634</u>
Barbara L. Mullin	Registration No. <u>38,250</u>	Rena Patel	Registration No. <u>41,412</u>
Kevin M. Flannery	Registration No. <u>35,871</u>	Mark J. Rosen	Registration No. <u>39,822</u>

Mitchell R. Brustein Registration No. 38,394
Peter M. Ullman Registration No. 43,963
Thomas E. Watson Registration No. 43,243
Gregory L. Hillyer Registration No. 44,154
Maria M. Kourtakis Registration No. 41,126

Richard B. LeBlanc Registration No. 39,495

his/her associates with full power to prosecute the above-identified application and to transact all business in the Patent Office connected therewith and requests that correspondence continue to be directed to the firm of WOODCOCK WASHBURN KURTZ MACKIEWICZ & NORRIS LLP at the above address.

Date: 11 August 1999



John W. Caldwell
Registration No. 28,937

Woodcock Washburn Kurtz
Mackiewicz & Norris LLP
One Liberty Place - 46th Floor
Philadelphia PA 19103
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DOCKET NO. THOM-0007

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of: BLACK, Robert Paul

International Patent Application
Serial No. PCT/GB98/02619

Group Art Unit:

Examiner:

International Filing Date: 01 September 19 98

For: FILLING COMPRISING A
POLYESTER FIBRE

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name; and

I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a

☒ Utility Patent ☐ Design Patent

is sought on the invention, whose title appears above, the specification of which:

- ☐ is attached hereto.
- ☒ was filed on 01 September 1998 as International Patent Application
Serial No. PCT/GB98/02619.
- ☐ said application having been amended on _____.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to be material to the patentability of this application in accordance with 37 CFR § 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a-d) of any **foreign application(s)** for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of any application on which priority is claimed:

DOCKET NO. THOM-0007

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PATENT

Priority Claimed (If X'd)	Country	Serial Number	Date Filed
<input checked="" type="checkbox"/>	GREAT BRITAIN	9720436.6	26 SEPTEMBER 1997
<input checked="" type="checkbox"/>	PCT	PCT/GB98/02619	01 SEPTEMBER 1998
<input type="checkbox"/>			
<input type="checkbox"/>			

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to be material to patentability as defined in 37 CFR § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

Serial Number	Date Filed	Patented/Pending/Abandoned

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

Serial Number	Date Filed

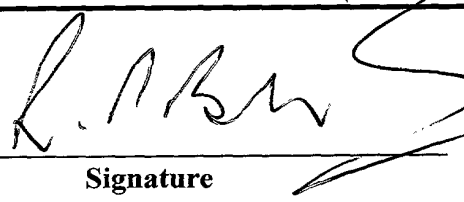

I hereby appoint the following persons of the firm of **WOODCOCK WASHBURN KURTZ MACKIEWICZ & NORRIS LLP**, One Liberty Place - 46th Floor, Philadelphia, Pennsylvania 19103 as attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

JOHN W. CALDWELLReg. No. 28,937STEVEN J. ROCCIReg. No. 30,489

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name: ROBERT PAUL BLACK	 Signature
Mailing Address: NEW PALE LODGE, MANLEY,  CHESHIRE W16 9EZ GREAT BRITAIN	
City/State of Actual Residence: MANLEY, CHESHIRE W16 9EZ GREAT BRITAIN	Date of Signature: <u>X 10.6.99</u> Citizenship: <u>BRITISH</u>